

U.S. Antarctic Marine Living Resources Program

2013/2014 Weekly Field Reports

Cape Shirreff, Livingston Island

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Science Report

Seabirds

1. Currently 27% of the 100 nests in the chinstrap reproductive study have hatched and are brooding chicks, 59% are still incubating eggs, and the other 14% have failed.
2. The peak hatch for gentoo penguins was on 29 December. Currently, 36% of the 50 gentoo nests in the reproductive study have hatched and are brooding chicks, 40% are still incubating full or partial clutches, and the other 24% have failed.
3. Of the 42 known-age gentoo penguin nests that were initiated, 16.7% nests have hatched, 61.9% are incubating partial or full clutches, and 21.4% have failed. Of the 39 initiated known-age chinstrap nests, 28.2% have hatched, 51.3% are still incubating clutches, and 20.5% have failed.
4. A TDR that was lost in the 2011-12 season was found in a chinstrap penguin's nest. Happily, we were able to download the data that it had collected.
5. We continue to monitor brown skua territories for nesting activity. Twenty-two pairs of brown skuas have initiated clutches; 21 of these pairs are incubating partial or full clutches and one pair has failed.
6. Two sheathbills have been noticed foraging in the small shag colony on the west coast.
7. We have been monitoring 40 kelp gull nests on the Cape. Of these nests, approximately 11 have hatched, and the others are still incubating eggs. Once the chicks hatch they are fairly mobile and cryptic which makes it sometimes difficult to figure out if the nest hatched or if the eggs or chicks were eaten. We have not noticed any obvious failures of the gull nests monitored.

Pinnipeds

8. All our CCAMLR attendance females (n=30) have completed at least one trip to sea. Mean trip duration for the first trip to sea was 3.3 days (s.d.: 1.3; range: 0.9-6.7). Six females have completed four trips to sea. The total number of trips logged as of yesterday was 81. One of our attendance females has lost her pup and a second has potentially lost her pup as well. We will confirm the loss of the second pup in the coming days.



9. Our six GPS instrumented females have all completed at least one trip to sea and together they have completed 15 trips to sea. The mean trip duration is 3.3 days (s.d.: 1.7; range: 1.6-6.7).
10. Thus far, our return rate for the tagged adult female population is 74.4%. The natality rate for returned females is 76.8%.
11. We censused the entire Cape for fur seal pups on 28-29 December. Our count indicated approximately a 17% reduction in fur seal pup production over last year.
12. The total number of southern elephant seals in the last weekly phocid census was down since the previous census. In general we have seen fewer southern elephant seals this year than last year.
13. We collected our second weekly sample of fur seal scats for studies of diet. We collect ten every week. All scats collected this week were composed primarily of krill.
14. The number of leopard seals patrolling our fur seal study beaches and hauling out is increasing quickly. Each year we deploy mark-recapture identification tags opportunistically in order to track leopard seal survival and seasonal distribution. To date we have seen nine animals that were tagged at Cape Shirreff in previous seasons. We have tagged an additional four leopard seals, and collected photo ID from an additional 11 animals.

Weather

15. This week we finally had a mean temperature above freezing! The mean temperature for the week was 0.5°C and the high was 4.2°C. The low was -1.5°C. The wind direction was spread evenly between west, east and north this week. The mean wind speed was 8.8 mph. The maximum wind speed was 33.0 mph. As we work our way toward shorter days, the sunrise and sunset are now 03:06 and 22:55 respectively. Mean daily solar radiation this week was 19,189 watts per sq. meter.

Camp

16. The Cape Shirreff field crew had a joyous and delicious Christmas holiday together. Christmas morning delivered Santa Claus, even despite our lack of a chimney. Presents from camp mates, and those sent down by family and friends were opened and enjoyed. After our various rounds, we pulled together a spectacular Christmas meal as well. A delicious smoked turkey, some salmon, potatoes au gratin, brussel sprouts, egg nog, and a pumpkin-pie-from-scratch rounded out the highlights. Thanks to everyone who remembered us during the holidays!



17. Our first week with consistent above-freezing temperatures allowed us to finally set up all of our fresh water collection gutters and barrels. We're looking forward to sending our water supply in a positive direction.
18. The warmer temperatures also allowed us to chip out additional deck space and improve our access to the sink drainage, propane, and fish boxes.
19. We observed another large fishing vessel off the west coast of the Cape this week. It was within sight for almost four days. Pictures were taken for further review.
20. We are excited about the approaching arrival of new camp mates to Cape Shirreff, as well as a team of scientists who are due at the nearby Chilean research station. In anticipation of their arrival trash is being staged on the boat landing beach for off-load and the last of our supply totes are being unpacked to clear storage space. Details to follow as folks arrive.
21. Everyone at the Cape sends their best wishes to all for a Happy New Year.

Presented by Doug Krause and Michelle Goh, with assistance from Kevin Pietrzak, McKenzie Mudge, and Trevor Joyce at the Cape Shirreff Field Camp, Livingston Island, South Shetland Islands, Antarctica

